

Remarks

Claims 1-12 are pending. Based on the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

I. Claim Rejections Under 35 U.S.C. § 103

The Office Action states that claims 1-12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kempf *et al.* (USPN 6,747,175) (hereinafter, "the '175 patent"). According to the Office Action,

[t]he difference between Applicant's claimed process and [the '175 patent], is that in [the '175 patent] the para-trifluoromethylaniline is introduced into the reaction in a hydrofluoric acid medium versus the neutral medium of the Applicant's claimed process.

(OA, p. 3). The Office Action then states that:

The rationale to omit this step [*i.e.* the hydrofluoric acid medium] is implied by [the '175 patent] when it is disclosed that in the process of [the '175 patent] chlorination of the para-trifluoromethylaniline is carried out once the para-trifluoromethylaniline was freed from the hydrofluoric acid.

(OA, pp. 3-4). Finally, the Office Action states that it would have been obvious,

to conduct the reaction process using just para-trifluoromethylaniline and chlorine in the monochlorobenzene (polar aprotic solvent) in a desire to increase the yield of the 2,6-dichloro-para-trifluoromethylaniline.

(OA, p. 4). Applicant respectfully traverses the rejection for the reasons set forth below.

The present claims as written are directed to a process that utilizes a polar aprotic solvent, which by this term's plain and ordinary meaning would not include a polar protic solvent such as hydrogen fluoride. Applicant notes that the present specification offers no indication that the term is to be used inconsistent from its plain and ordinary meaning. In view of this, Applicant respectfully points out that the Office Action incorrectly states that the '175 patent discloses all of the process features of the claimed invention. *See*, OA p. 3, second full paragraph. In fact, the '175 patent only discloses a process of chlorinating in a

hydrofluoric medium. Some of the advantages of the presently claimed method are that it results in a sufficiently pure compound, and that it avoids the use of hydrofluoric acid.

Applicant respectfully submits that the Examiner has not established a reasonable expectation of success in arriving at the presently claimed process, which is a basic criterion of establishing a *prima facie* case of obviousness. See M.P.E.P. 2143.

First, the Office Actions states that the phrase, “para-trifluoromethylaniline freed from its hydrofluoric acid” is an implied rationale for conducting the reaction in the absence of a hydrogen fluoride medium. However, in the correct context, the ‘175 patent is referring only to the release of aniline from its complexes with hydrofluoric acid and hydrochloric acid in the hydrofluoric acid medium. See, column 1, lines 32-58 and column 3, lines 38-67. Specifically, the ‘175 patent’s process is reportedly a chlorine/fluorine exchange. See, e.g., Abstract. The most widely used and least expensive reactant for a halogen exchange is “unquestionably liquid-phase hydrofluoric acid.” See, column 1, lines 20-22. “The hydrochloric acid given off by the chlorination of the aniline subsequently has to be neutralized to release the amine.” Id. at lines 44-46. The ‘175 patent’s process provides,

a stage of chlorine/fluorine exchange in a
hydrofluoric acid medium (with or without diluent)
and which makes it possible to avoid a twofold
release of the aniline, once from hydrofluoric acid
and another time from hydrochloric acid.

Id. at lines 51-55. The ‘175 patent states that an advantage of its process is the “much easier release of the aniline from its complexes with hydrofluoric acid.” Column 3, lines 38-39. The release is facilitated by simple distillation, “to remove the acids bonded to the aniline thus depleted by the chlorination.” Id. at lines 44-45. Moreover, in discussing the products of the reaction, at column 6, lines 1-2, the ‘175 patent states that the yields shown in the table under Example 1 reflect, “the anilines present *in the hydrofluoric acid phase*.” (Emphasis added). In view of the above, and in the correct context, the phrase “para-trifluoromethylaniline freed from its hydrofluoric acid” does not imply that hydrofluoric acid becomes absent at some point in the ‘175 patent’s process or that it is not an essential reactant in the first place.

Second, the data shown in the patent do not support the assertion that one of ordinary skill in the art would “conduct the reaction process using just para-trifluoromethylaniline and chlorine in the monochlorobenzene (polar aprotic solvent) in a desire to increase the yield.” OA, p. 4. The data for “Test No. 3” in the table under Example 1 show that when

monochlorobenzene ("MCB") is present with hydrofluoric acid (HF), the yields are substantially lower. Further, in the same table under "Test No. 4," when MCB is absent ("No MCB"), the yield is substantially greater than that of Test No. 3. In view of these data, Applicant respectfully submits that there is no support whatsoever for the assertion that one of ordinary skill in the art would use monochlorobenzene to increase yield. Rather, the data suggest just the opposite.

Therefore, a skilled artisan having read and understood the '175 patent would have had no reasonable expectation of success in removing hydrogen fluoride from the reaction or substituting it with any other solvent. For at least this reason, a *prima facie* case of obviousness has not been established.

In view of the above arguments, Applicant respectfully submits that the rejection of claim 1 and each of its dependent claims 2-12 has been overcome. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 1-12 under 35 U.S.C. § 103, and allow each of these claims.

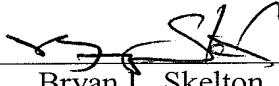
Conclusion

Reexamination of the application and reconsideration of the rejection is respectfully requested. If any questions remain, the Examiner is invited to contact the undersigned at the number given below.

Respectfully submitted,

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